

AGE, SEX, AND LENGTH COMPOSITION OF CHINOOK SALMON FROM THE 2002 KUSKOKWIM RIVER SUBSISTENCE FISHERY

Abstract: Age, sex, and length (ASL) data were collected from chinook salmon harvested during the 2002 Kuskokwim River subsistence fishery to characterize the composition of harvest from the lower, middle, and upper river reporting areas. Data collections were coordinated by the Alaska Department of Fish and Game (ADF&G), Orutsararmiut Native Council (ONC), Kuskokwim Native Association (KNA), and McGrath Native Village Council (MNVC). Thirty-six subsistence fishers, from seven communities, collected most of the samples. The information for each chinook salmon included scales used for age determination, length, sex, date and location of capture, and gear type used for capture. A total of 2,228 chinook salmon were sampled in 2002 (1,501 lower Kuskokwim River, 643 middle Kuskokwim River, and 84 upper Kuskokwim River samples), which is an increase over the 1,170 fish sampled in 2001 (1,010 lower Kuskokwim River, 130 middle Kuskokwim River, and 30 upper Kuskokwim River). Ages were determined for 2,014 of the fish (90.4%). Samples were collected from a variety of gear types, but most fish were caught in gillnets with a mesh size 8 inches or larger (i.e., large mesh gear). Age-1.2 chinook salmon accounted for 7.8% of the 2002 subsistence harvest, which was far less than the 23.4% average from escapement projects. Conversely, older aged chinook salmon (age 1.4, 1.5, and 1.6) accounted for 58.9% of the subsistence harvest, compared to an average of 43.3% at escapement projects. Female Chinook salmon comprised 40.7% of the harvest, which was more than the 31.9% average from escapement projects. Findings from 2002 provide the first complete year of baseline data for assessing the influence of the subsistence fishing schedule, which was instituted as a management tool in 2001 in response to Kuskokwim River chinook salmon being identified as a stock of concern by the Alaska Board of Fisheries. Preliminary comparison between samples collected in the lower and middle river shows comparable percentages of older age fish (58.2% and 60.6%) and females (41.3% and 39.8%). The relative age and sex composition of the subsistence harvest with large mesh gear was uniform over time in the lower river; however, in the middle river, the percentage of older age fish and females decrease as the season progressed. The subsistence sampling program should be continued in the current design in order to allow for replicate sampling to verify the preliminary patterns described above. Furthermore, assessment of the influence of the subsistence fishing schedule requires collecting comparable data sets when the subsistence fishing schedule is not invoked. Finally, the numbers of samples collected from the middle and upper river, and the number of participants from those areas, should both be increased in order to better represent the subsistence harvest from those reporting areas.

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